“ The bodies we observed were all perfectly round, with about the brightness of *Venus*, as seen in the same field of view with them ; and their light was white, or with a slight tinge of blue.

“ The time they occupied in passing was, as nearly as I could estimate, about one-fourth of a second of time; but they showed no tail of light, such as seen in the case of shooting stars by night.

“ They did not cease for a minute, passing often in inconceivable numbers, from the time I first saw them, viz. about half-past 9 A.M. to about half-past 3 P.M. when they became fewer, passed at longer intervals, and then finally ceased.

“ There was nothing remarkable at night, that I saw; but having prepared the equatoreal on the following day, which was equally favourable for observation, I observed *one* body pass, precisely similar to the vast number we had observed the day previous.

“ They occupied a zone, as nearly as I could judge, about 18° in breadth ; and as both *Mercury* and *Venus* were visible by the telescope, I had an opportunity of comparing them with these planets; both of which presented a remarkable difference to the bodies crowding through the field of view.

“ I expected that the appearance would be witnessed by many observers, and delayed for some days noticing the circumstance to any other astronomers; but not finding any remark on the subject in the newspapers, I then stated the occurrence to Mr. Hind, of the South Villa Observatory, who thought it of sufficient importance to be communicated to the Society.

“ On comparing the phenomenon we witnessed with that observed at Boston, U.S. by Messrs. Olmsted and Palmer, as noticed by Capt. Smyth, in his *Cycle*, vol. i. p. 164, and by Baron Humboldt, *Cosmos*, vol. i. p. 112, there appears an entire similarity between them, with the exception of what we saw occurring in the day, while the phenomenon they witnessed was during the night.

“ These gentlemen compared what they saw to flakes of falling snow, and nothing could better describe what we witnessed, allowance being made for the greater brilliancy of daylight, which diminished their intensity of lustre; but being seen upon the deep blue vault of heaven, they presented an appearance of beauty and interest never to be erased from the memory.”*

Rule for the Signs of the Terms in the Equation of Equal Altitudes.

By Capt. Shadwell, R.N. F.R.A.S.

“ An idea has recently occurred to me with reference to the formulæ for the ‘Equation of Equal Altitudes,’ which perhaps you may think worthy of notice.

“ I have observed that many persons are at fault when called

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* The remark appended by the Editor to Mr. Read’s former letter is shown by the present Letter to be erroneous, and must be withdrawn. It is, perhaps, not impossible that even an experienced observer should have been misled by some cause which temporarily affected his vision; but the luminous bodies, seen by Mr. Read, being also seen repeatedly, and for hours, by two members of his own family accustomed to the use of the telescope, and also by a visitor, negative any such explanation.—*Ed. N.*

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upon to recollect the signs of the corrections of the two parts of the 'Equation of Equal Altitudes;' and it has occurred to me that a convenient technical rule might be given, apparently independent of any mathematical condition whatever.

"Most of the writers on navigation express the rule in such terms as apparently to involve several distinctions of cases.

"The rule, as it is very clearly expressed in Riddle's *Navigation*, is as follows:—

"'The first part, that under log A, is + when the polar distance is increasing, and — when it is decreasing. And the second, that under log B, is — when the polar distance is acute and increasing, or obtuse and decreasing, and + when the polar distance is obtuse and increasing, or acute and decreasing.'

"A brief examination of these conditions will show that the following law prevails:—

"The sign of the first part is positive from the summer to the winter solstice, and negative from the winter to the summer solstice.

"And that of the second part, positive from the equinoxes to the solstices, and negative from the solstices to the equinoxes.

"The polar distance in Mr. Riddle's rule is supposed to be always measured from the elevated pole, and the above technical rule will hold equally good in both hemispheres, provided we agree to understand the terms summer and winter solstices in their *natural* sense, according to the actual seasons at the places of observation, and not in that technical sense which the monopoly of astronomical observation in the northern hemisphere has caused astronomers to attach to them.

"It will thus be observed, that the signs of the two parts of the equation can thus be expressed independently of any mathematical condition whatever, and may be viewed merely as simple functions of the seasons of the year."

Solar Spots.

Captain Shea, of the H.I.C.S. has presented the Society with a continuation of drawings of the solar spots during the past year. The drawings are in a book, in a very regular method, and easily referred to. There are drawings, too, of several phases of the late solar eclipse with the times annexed.

Capt. Shea seems to be of opinion that the spots are bodies *detached* from the sun, and thinks that this is supported by some of the phenomena witnessed during the late eclipse. This idea was, if we remember, satisfactorily refuted by Galileo, and certainly has since received no increase of evidence in its favour.

Mr. Joseph Turnbull, of Kentish Town, has presented to the Society a very full series of drawings of the sun from March 22 to October 2, 1851. They were observed with a refractor of 2½ inches aperture, power 45. The scale is rather small.

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